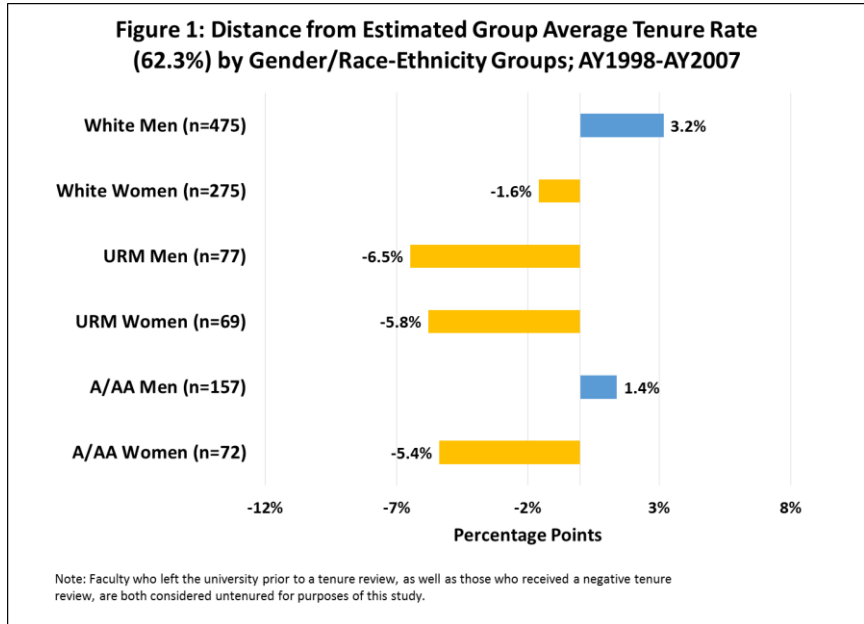


Tenure Cohort Analysis AY1998-AY2007
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This document summarizes the findings of an analysis designed to assess one measure of promotion outcomes by gender and race-ethnicity. We considered instructional track faculty who were hired as assistant professors between AY1998 and AY2007. Analyses of this group of faculty revealed differences by gender/race-ethnicity. We subsequently split the sample into two cohorts: those hired AY1998-2002 (cohort 1) and those hired AY2003-2007 (cohort 2). Defining two separate cohorts allowed us to assess potential change over time. When the cohorts were considered separately important gender and race-ethnicity differences became more evident.

All tenure track faculty hired as assistant professors during this time period were coded as having achieved tenure or not within 10 years after initial hire; the sample included those who were still on the UM faculty ten years after hire as well as those who left before or after they were reviewed for promotion¹. Thus, these data cannot differentiate faculty who left UM before or as a result of not being promoted. Figure 1 provides an initial look at the proportion of faculty who received tenure within 10 years of hire by gender and race-ethnicity for the full sample combined (AY1998-2007). This figure displays the rates of each group in relation to the group estimated average (62.3%). The rates for white and Asian/Asian American male faculty were higher than the average for all faculty in the sample. By contrast, the rates for white and Asian/Asian American women and URM women and men were below the average for all faculty.



To investigate change in this pattern over time, we divided the data into two five-year periods and further analyzed the data by cohort. We report on the results of the cohort analyses below.

¹ We do not have specific tenure review outcome data for the faculty in our sample; we know who received tenure, but we do not know of those who left without tenure whether or not they had an unsuccessful tenure review. Thus, our strategy was to identify all faculty in each cohort who had achieved tenure at UM at some point within 10 years of their hire, whether or not they were still at UM throughout that 10 year period. These faculty were considered “tenured” for the purposes of this study; those who left UM without having been tenured (either before or after a tenure review) were considered “untenured” for the purposes of this study.

Table 1: Full Sample and Cohorts 1 and 2 by Gender and Race-Ethnicity																		
Race- Ethnicity	Full sample						Cohort 1						Cohort 2					
	women		men		total		women		men		total		women		men		total	
	N	%	N	%	N	%	N	%	N	%	N	%	N	%	N	%	N	%
URM	69	6%	77	7%	146	13%	42	8%	42	8%	84	16%	27	5%	35	6%	62	11%
A/AA	72	6%	157	14%	229	20%	27	6%	73	13%	100	18%	45	8%	84	14%	129	22%
WH	275	24%	475	42%	750	67%	115	21%	244	45%	359	66%	160	27%	231	40%	391	67%
total	416	37%	709	63%	1125	100%	184	34%	359	66%	543	100%	232	40%	350	60%	582	100%

Table 1 provides data on the number and percentages of faculty by gender and race-ethnicity for the entire sample as well as separately for each cohort. The cohorts were quite similar by gender (34% of cohort 1 faculty were women; 40% were women in cohort 2). Similarly, both cohorts were two-thirds white (66% for cohort 1 and 67% for cohort 2). It is important to note that there were proportionately fewer URM faculty in cohort 2 (the rate went from 16% to 11%) and proportionately more Asian/Asian American faculty (the rate went from 18% to 22%).

These data were examined for differences by gender and/or race-ethnicity within cohort. Differences were calculated simply by subtracting the percent who were tenured and still at UM or who achieved tenure prior to leaving UM in one group from the percent who were tenured and still at UM or who achieved tenure prior to leaving UM in the comparison group. We first assessed gender and race-ethnicity differences separately and then considered the data for six different gender/race-ethnicity groups: URM women, URM men, Asian/Asian-American women, Asian/Asian-American men, white women, and white men.

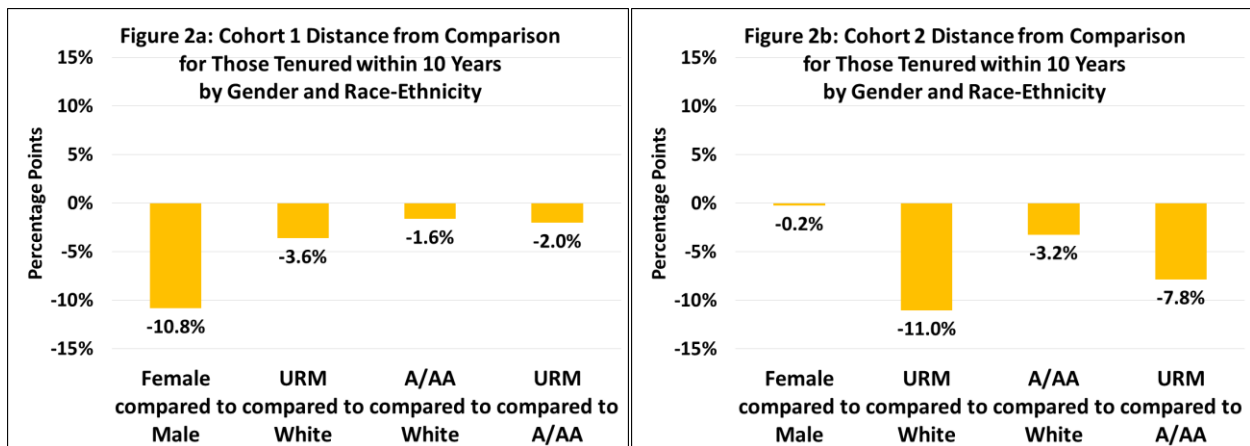
Differences were calculated in three different ways separately for each cohort:

- differences by gender (comparing rates for women to rates for men) and differences by race-ethnicity (e.g., comparing rates for white faculty to those for URM and Asian/Asian American faculty);
- differences by gender within each race-ethnicity group (e.g., comparing URM women and URM men) and differences by race-ethnicity with each gender group (e.g., comparing URM women and Asian/Asian American women);
- differences by the six gender/race-ethnicity groups in comparison to each cohort’s overall rate

This approach allows us to consider the faculty on several dimensions (e.g., gender, race-ethnicity, gender/race-ethnicity groups) and in relation to different groups.

Differences by Gender and by Race-Ethnicity

We first considered differences by gender (comparing rates for women to rates for men). We calculated the difference in rates by gender within each cohort. The overall difference by gender in cohort 1 (Figure 2a on the next page) was quite large: the rate for men was 10.8 percentage points higher than that for women. However, the gender difference in cohort 2 (Figure 2b on the next page) was quite small: the rate for men was 0.2 percentage points higher than that for women.

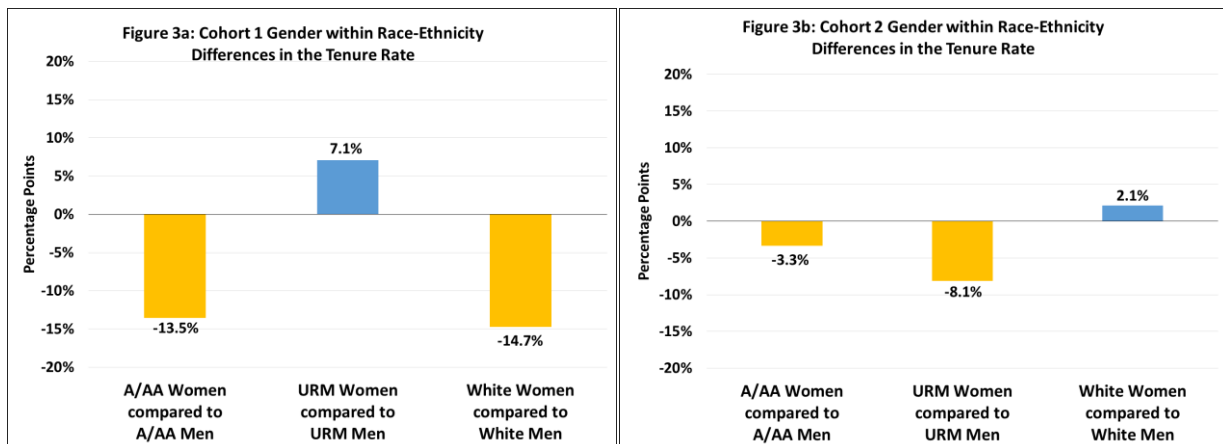


There were also differences by race-ethnicity for cohort 1; the percentage points for white faculty were higher than those for URM and Asian/Asian American faculty but the differences were smaller than what was found for gender: the white faculty rate was 3.6 percentage points higher than the rate for URM faculty and 1.6 percentage points higher than that for Asian/Asian American faculty (Figure 2a). Asian/Asian American rate was also higher (2 percentage points) than that for URM faculty.

However, these race-ethnicity differences increased for faculty in cohort 2. The white faculty rate was 11 percentage points higher than that for URM faculty and 3.2 percentage points higher than the rate for Asian/Asian American faculty (Figure 2b). The rate for Asian/Asian American faculty was also higher than that for URM faculty (the difference was 7.8 percentage points).

Differences by Gender within Race-Ethnicity

We examined differences in rates by six combined gender/race-ethnicity groups. We first considered variations by gender within each race-ethnicity group (e.g. comparing URM women to URM men) separately for each cohort. Cohort 1 rates (Figure 3a) for white women and Asian/Asian American women were lower than their male counterparts; in the case of white women the difference was -14.7 percentage points and in the case of Asian/Asian American women the difference was -13.5 percentage points. For URM faculty the reverse was true: the rate for women was higher than that for men; however, the difference was half what was found for white and Asian/Asian American faculty (+7.1 percentage points).

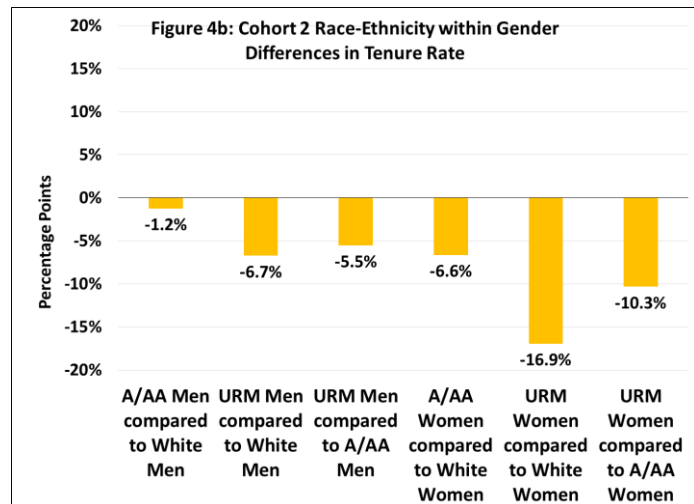
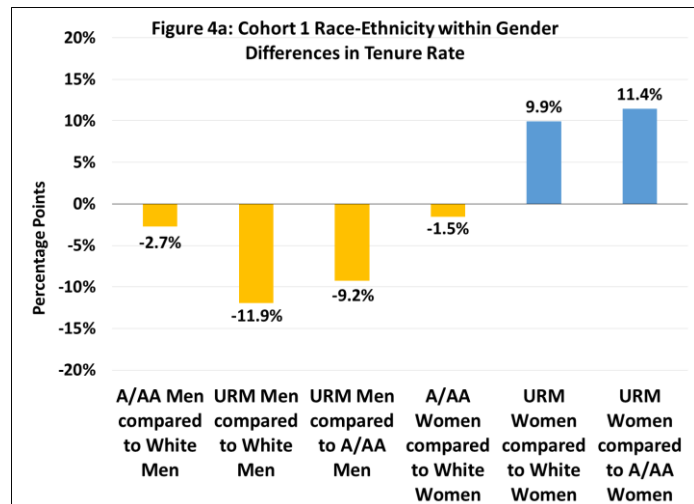


Cohort 2 data (Figure 3b) revealed a reversed pattern in the case of white and URM faculty. In this case, the rate was slightly higher for white women (+2.1 percentage points) compared to white men and lower for URM women (-8.1 percentage points) compared to URM men. By contrast, we find the same pattern for Asian/Asian American faculty that was evident in the cohort 1 data: the rate for Asian/Asian American women was lower (-3.3 percentage points) than that for Asian/Asian American men; however, the differences was much smaller than that for cohort 1 data.

Differences by Race-Ethnicity within Gender

Assessing differences by race-ethnicity within gender (e.g., URM women compared to white women), we found that the rates for white faculty were generally higher than those for faculty of color in cohort 1 (Figure 4a). The one exception was in comparing URM women to white and Asian/Asian American women; in these comparisons URM women’s rates were higher. By contrast, the percentage for URM men was lower than that for white and Asian/Asian American men.

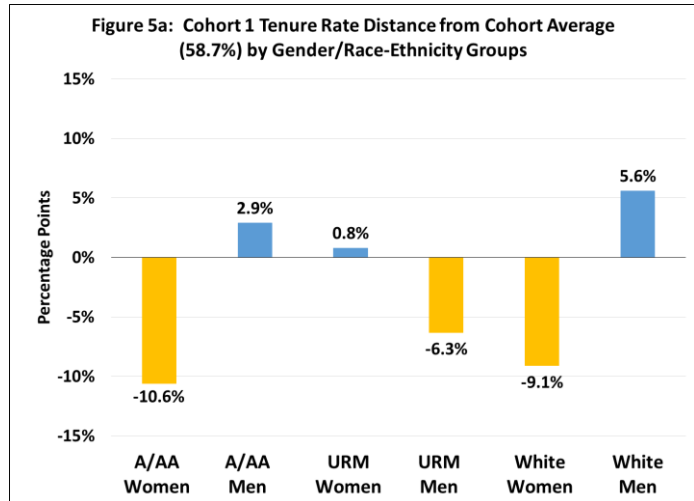
The cohort 2 data (Figure 4b) revealed an even more consistent pattern: white faculty had higher rates than faculty of color regardless of gender. Moreover, Asian/Asian American male and female faculty rates were also higher than their URM counterparts.



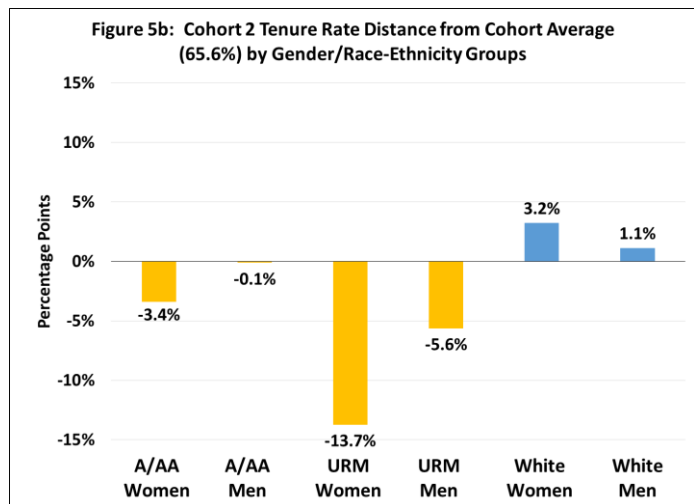
Differences by Gender/Race-Ethnicity in Relation to Cohort Average

To further investigate differences among the six gender and race-ethnicity groups, we examined the rates of each group in relation to its cohort average. We compared each group’s rate with the overall rate of all faculty within cohort. In cohort 1 (Figure 5a on the next page) the rate for URM women was similar to the average rate across faculty (the difference was +0.8 percentage points). The rates for white and Asian/Asian American male faculty were higher than the average for all cohort 1 faculty: +2.9 percentage points for Asian/Asian American male faculty and +5.6 percentage points for white male

faculty. By contrast, rates for Asian/Asian American and white women and URM men were lower than the cohort average. The rate for Asian/Asian American women was -10.6 percentage points and that for white women was -9.1 percentage points compared to the overall average. The rate for URM men was -6.3 percentage points. These data suggest a potential advantage for white and Asian/Asian American men in terms of the tenure process and a potential deficit for women (especially white and Asian/Asian American) and URM men for this earlier cohort faculty. They also suggest that changes in hiring practices to increase hiring of women and racial-ethnic minorities are not maintained by later retention success.



For cohort 2 assistant professors (see Figure 5b), only white faculty rates were above the average and the differences were small: +3.2 percentage points for women and +1.1 percentage points for men. Rates for faculty of color were below the average. The differences for Asian/Asian America faculty were similarly small: -3.4 percentage points for Asian/Asian American women and -0.1 percentage points for Asian/Asian men. By contrast, the rate difference was much larger for URM faculty: -13.7 percentage points for URM women and -5.6 percentage points for URM men compared to the average for all cohort 2 faculty.



In summary, we examined whether tenure-track faculty hired as assistant professors achieved tenure or not within 10 years after initial hire. We note that faculty who left without tenure may have left well before a tenure review, during the tenure process, or even after a successful tenure review but before date of promotion. The data suggest an advantage for white men and A/AA men assistant professors hired AY1998-2002 (cohort 1) and a disadvantage for white and A/AA women and for URM men. By contrast, for hires in AY2003-2007 (cohort 2), the data suggest an advantage for white faculty and a disadvantage for URM faculty and A/AA women.